



Image \$1732

PTO/SB/21 (08-03)

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|-----------------------------------------------------------------------------------------|----------------------|------------------------|---------|
| TRANSMITTAL FORM (to be used for all correspondence after initial filing) | Application Number | 10/046,594 | |
| | Filing Date | October 29, 2001 | |
| | First Named Inventor | Stephen Y. Chou | |
| | Art Unit | 1732 | |
| | Examiner Name | Mathieu D. Vargot | |
| Total Number of Pages in This Submission | | Attorney Docket Number | U6090-3 |

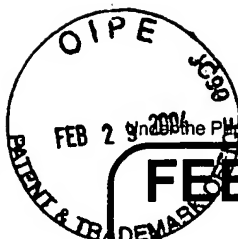
| ENCLOSURES (check all that apply) | | |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Fee Transmittal Form | <input type="checkbox"/> Drawing(s) | <input type="checkbox"/> After Allowance communication to Group |
| <input type="checkbox"/> Fee Attached | <input type="checkbox"/> Licensing-related Papers | <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences |
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| <input type="checkbox"/> Affidavits/declaration(s) | <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence | <input type="checkbox"/> Status Letter |
| <input type="checkbox"/> Extension of Time Request | <input type="checkbox"/> Terminal Disclaimer | <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): |
| <input type="checkbox"/> Express Abandonment Request | <input type="checkbox"/> Request for Refund | PTO-1449 - 6 sheets 20 References Post Card |
| <input checked="" type="checkbox"/> Information Disclosure Statement | <input type="checkbox"/> CD, Number of CD(s) _____ | |
| <input type="checkbox"/> Certified Copy of Priority Document(s) | Remarks | |
| <input type="checkbox"/> Response to Missing Parts/ Incomplete Application | | |
| <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | | |

| SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT | |
|--------------------------------------------|------------------------------------------------------------------------------------|
| Firm or Individual name | GLEN E. BOOKS LOWENSTEIN SANDLER PC 65 LIVINGSTON AVENUE, ROSELAND, NJ 07068 |
| Signature | <i>Glenn E Books</i> |
| Date | FEBRUARY 19, 2004 |

| CERTIFICATE OF TRANSMISSION/MAILING | | | |
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| I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the | | | |
| Typed or printed name | KELLY BILLINGSLEY | | |
| Signature | <i>Kelly Billingsley</i> | Date | FEBRUARY 19, 2004 |

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) \$180.00

Complete if Known

Application Number 10/046,594
Filing Date OCTOBER 29, 2001
First Named Inventor STEPHEN Y. CHOU
Examiner Name MATHIEU D. VARGOT
Art Unit 1732
Attorney Docket No. U6090-3

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit
Account
Number

501358

Deposit
Account
Name

LOWENSTEIN SANDLER PC

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) during the pendency of this application

☐ Charge fee(s) indicated below, except for the filing fee
to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

| Large Entity | | Small Entity | | Fee Description | Fee Paid |
|--------------|----------|--------------|----------|------------------------|----------|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | | |
| 1001 | 750 | 2001 | 375 | Utility filing fee | |
| 1002 | 330 | 2002 | 165 | Design filing | |
| 1003 | 520 | 2003 | 260 | Plant filing fee | |
| 1004 | 750 | 2004 | 375 | Reissue filing | |
| 1005 | 160 | 2005 | 80 | Provisional filing fee | |
| SUBTOTAL (1) | | | | | (\$) |

2. EXTRA CLAIM FEES FOR UTILITY AND

| Total Claims | | Extra Claims | | Fee from below | | Fee Paid |
|--------------------|--|--------------|---|----------------|--|----------|
| | | | | | | |
| Total Claims | | -20** = | 0 | X | | 0.00 |
| Independent Claims | | -3** = | 0 | X | | 0.00 |
| Multiple Dependent | | | | | | |

| Large Entity | | Small Entity | | Fee Description | Fee Paid |
|--------------|----------|--------------|----------|------------------------------------------------------------|-------------|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | | |
| 1202 | 18 | 2202 | 9 | Claims in excess of 20 | |
| 1201 | 84 | 2201 | 42 | Independent claims in excess of 3 | |
| 1203 | 280 | 2203 | 140 | Multiple dependent claim, if not paid | |
| 1204 | 84 | 2204 | 42 | ** Reissue independent claims over original patent | |
| 1205 | 18 | 2205 | 9 | ** Reissue claims in excess of 20 and over original patent | |
| SUBTOTAL (2) | | | | | (\$) \$0.00 |

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

| Large Entity | | Small Entity | | Fee Description | Fee Paid |
|---------------------|----------|--------------|----------|----------------------------------------------------------------------------|----------|
| Fee Code | Fee (\$) | Fee Code | Fee (\$) | | |
| 1051 | 130 | 2051 | 65 | Surcharge - late filing fee or oath | |
| 1052 | 50 | 2052 | 25 | Surcharge - late provisional filing fee or cover sheet | |
| 1053 | 130 | 1053 | 130 | Non - English specification | |
| 1812 | 2,520 | 1812 | 2,520 | For filing a request for <i>ex parte</i> reexamination | |
| 1804 | 920* | 1804 | 920* | Requesting publication of SIR prior to Examiner action | |
| 1805 | 1,840* | 1805 | 1,840* | Requesting publication of SIR after Examiner action | |
| 1251 | 110 | 2251 | 55 | Extension for reply within first month | |
| 1252 | 410 | 2252 | 205 | Extension for reply within second month | |
| 1253 | 930 | 2253 | 465 | Extension for reply within third month | |
| 1254 | 1,450 | 2254 | 725 | Extension for reply within fourth month | |
| 1255 | 1,970 | 2255 | 985 | Extension for reply within fifth month | |
| 1401 | 320 | 2401 | 160 | Notice of Appeal | |
| 1402 | 320 | 2402 | 160 | Filing a brief in support of an appeal | |
| 1403 | 280 | 2403 | 140 | Request for oral hearing | |
| 1451 | 1,510 | 1451 | 1,510 | Petition to institute a public use proceeding | |
| 1452 | 110 | 2452 | 55 | Petition to revive - unavoidable | |
| 1453 | 1,300 | 2453 | 650 | Petition to revive - unintentional | |
| 1501 | 1,300 | 2501 | 650 | Utility issue fee (or reissue) | |
| 1502 | 470 | 2502 | 235 | Design issue fee | |
| 1503 | 630 | 2503 | 315 | Plant issue fee | |
| 1460 | 130 | 1460 | 130 | Petitions to the Commissioner | |
| 1807 | 50 | 1807 | 50 | Processing fee under 37 CFR § 1.17(q) | |
| 1806 | 180 | 1806 | 180 | Submission of Information Disclosure Statement | 180.00 |
| 8021 | 40 | 8021 | 40 | Recording each patent assignment per property (times number of properties) | |
| 1809 | 750 | 2809 | 375 | Filing a submission after final rejection (37 CFR § 1.129(a)) | |
| 1810 | 750 | 2810 | 375 | For each additional invention to be examined (37 CFR § 1.129(b)) | |
| 1801 | 750 | 2801 | 375 | Request for Continued Examination (RCE) | |
| 1802 | 900 | 1802 | 900 | Request for expedited examination of a design application | |
| Other fee (specify) | | | | | |

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$) \$180.00

SUBMITTED BY

| | | | | | |
|-------------------|----------------------|-----------------------------------|-------------------|-----------|--------------|
| Name (Print/Type) | GLEN E. BOOKS | Registration No. (Attorney/Agent) | 24,950 | Telephone | 973-597-2500 |
| Signature | <i>Glen E. Books</i> | Date | FEBRUARY 19, 2004 | | |

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This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Stephen Y. Chou) Examiner: Mathieu D. Vargot
Application No.: 10/046,594) Group Art Unit: 1732
Filed: October 29, 2001)
For: IMPROVED RELEASE SURFACES,)
PARTICULARLY FOR USE IN)
NANOIMPRINT LITHOGRAPHY) February 19, 2004

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97 and 1.98, the Examiner's attention is directed to the documents listed on the enclosed PTO-1449. It is respectfully requested that the PTO-1449 form be initialed and returned, indicating that the cited references have been considered.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

February 19, 2004

(Date of Deposit)

02/26/2004 SZEWDIE1 00000093 501358 10046594

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Kelly Billingsley

(Name)

Kelly Billingsley
Signature

February 19, 2004
Date of Signature

FEES

The Commissioner is authorized to charge \$180.00 to Deposit Account 501358 to cover the required Information Disclosure Statement fee under 37 C.F.R. 1.17(p).

CONCLUSION

Applicant's undersigned attorney may be reached by telephone at (973) 597-2500.

All correspondence should continue to be directed to our address listed below.

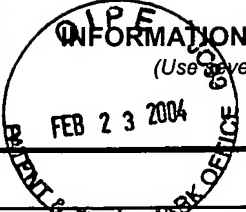
Respectfully submitted,



GLEN E. BOOKS, ESQ.

Registration No. 24,950

DOCKET ADMINISTRATOR
Lowenstein Sandler PC
65 Livingston Avenue
Roseland, NJ 07068
973-597-6162

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|  | | | | ATTY DOCKET NO. U6090-3 | | SERIAL NO. 10/046,594 | |
| | | | | Stephen Y. Chou | | | |
| | | | | FILING October 29, 2001 | | GROUP 1732 | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| *EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
| | | 5,425,848 | 06/20/95 | Haisma et al. | | | |
| | | 5,503,963 | 04/02/96 | Bifano | | | |
| | | 4,543,225 | 09/24/85 | Beaujean | | | |
| | | 5,434,107 | 07/18/95 | Paranjpe | | | |
| | | 5,338,396 | 08/16/94 | Abdala et al. | | | |
| | | 5,471,455 | 11/28/95 | Jabr | | | |
| | | 4,287,235 | 09/01/81 | Flanders | | | |
| | | 4,512,848 | 04/23/85 | Deckman et al. | | | |
| | | 5,259,926 | 11/09/93 | Kuwabara et al. | | | |
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| FOREIGN PATENT DOCUMENTS | | | | | | | |
| | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION YES NO |
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| | | | | | | | |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | | | |
| | | | Kamins, T.I., "Positioning of Self-Assembled, single-crystal, germanium islands by silicon nanoimprinting" Applied Physics Letter, Vol. 74, No. 12, March 22, 1999 | | | | |
| | | | Wang, J., et al., "Fabrication of a new broadband waveguide polarizer with a double-layer 190 nm period metal-gratings using nanoimprint lithography" J. Vac. Sci. Technol. B 17 (6) Nov/Dec 1999. | | | | |
| EXAMINER | | | | DATE CONSIDERED | | | |

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FEB 23 2004

ATTY DOCKET NO.
U6090-3

SERIAL NO. 10/046,594

Stephen Y. Chou

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| FILING | October 29, 2001 |
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U.S. PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

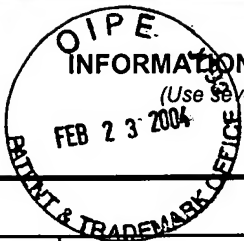
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|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | Tan, H., et al., "Roller Nanoimprint Lithography" Vac. Sci. Technol. B 16 (6) Nov/Dec 1998. |
| | | | Feynman, Richard, "There's Plenty of Room at the Bottom-An Invitation to Enter a New Field of Physics" talk delivered at the annual meeting of the American Physical Society at the California Institute of Technology (Caltech) in 1959, published in February 1960 issue of Caltech's "Engineering and Science". |

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



**INFORMATION DISCLOSURE CITATION***(Use several sheets if necessary)*

ATTY DOCKET NO.

U6090-3

SERIAL NO.

10/046,594

Stephen Y. Chou

FILING

October 29, 2001

GROUP

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U.S. PATENT DOCUMENTS

| *EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
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OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

| | | | |
|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | Aumiller et al., "Submicrometer Resolution Replication of Relief Patterns for Integrated Optics", J. Appl. Phys., Vol. 45, pp. 4557-4562, (1974) |
| | | | Nisper, "Injection-molded replication of binary optic structures", SPIE v2600 Oct 23-24, 1995 p. 56-64 0227-786X |

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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|  <p style="text-align: center;">INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)</p> | ATTY DOCKET NO. U6090-3 | SERIAL NO. 10/046,594 |
| | Stephen Y. Chou | |
| | FILING October 29, 2001 | GROUP 1732 |

U.S. PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | Shvartsman, "Holographic optical elements by dry photopolymer embossing" SPIE (1991) 1461 (pract. Holog. S) pp. 313-320 |
| | | | "Fabrication of submicron crossed square wave gratings by dry etching and thermoplastic replication techniques" JVST B Vol. 1, No. 4, Dec 1983 pp. 1207-1210 |

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|-----------------|------------------------|
| EXAMINER | DATE CONSIDERED |
|-----------------|------------------------|

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